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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,247	01/23/2004	Rene Gallezot	FR920020090US1	8047

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IBM COPORATION (RTP)
C/O SCHUBERT OSTERRIEDER & NICKELSON PLLC
6013 CANNON MOUNTAIN DRIVE, S14
AUSTIN, TX 78749

EXAMINER

BAKER, STEPHEN M

ART UNIT	PAPER NUMBER
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2133

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/764,247

Applicant(s)

GALLEZOT ET AL.

Examiner

Stephen M. Baker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 13-20 is/are allowed.
- 6) ☒ Claim(s) 7-9 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,771,126 to Apple, Jr. (hereafter "Apple").

Apple discloses an FEC encoder and decoder for correcting scrambler-multiplied errors using an expurgated code. Apple's FEC encoding (113, 114) is "computing forward error correction bits of said selected set of data ..." and "merging said selected set of data and said forward error correction bits ..." and is performed before scrambling (116). Apple's code is selected for its ability to generate suitable syndromes (Theorem 2, column 5).

3. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,923,680 to Brueckheimer *et al* (hereafter "Brueckheimer").

Brueckheimer discloses an FEC encoder and decoder for correcting scrambler-multiplied errors using a shortened code. Brueckheimer's FEC encoding (not shown) is "computing forward error correction bits of said selected set of data ..." and "merging said selected set of data and said forward error correction bits ..." and is performed before scrambling. Brueckheimer's code is selected for its ability to generate suitable syndromes.

Claim Rejections - 35 USC § 103

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apple.

Apple's receiver descrambles received codewords before decoding the codewords. Apple's decoder generates a syndrome vector (S_1, S_3), and an error-free packet has an all-zero syndrome vector (column 10, line 45+).

Apple does not mention whether the received data is carried in "packets." Official notice is given that the advantages of placing data in packets for transmission, such as for supporting data routing in large communication networks, were well-known at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply Apple's encoder and decoder to data carried in packets. Such an application would have been obvious because the advantages of placing data in packets for transmission were already well-known.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brueckheimer.

Regarding claim 8, Brueckheimer's receiver descrambles received codewords before decoding the codewords. Brueckheimer's decoder generates a syndrome vector (σ, S_0-S_8), and an error-free packet has an all-zero syndrome vector.

Brueckheimer does not mention whether the received data is carried in "packets." Official notice is given that the advantages of placing data in packets for transmission, such as for supporting data routing in large communication networks, were well-known at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply Brueckheimer's

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encoder and decoder to data carried in packets. Such an application would have been obvious because the advantages of placing data in packets for transmission were already well-known.

Regarding claim 9, Brueckheimer discloses flagging a non-zero syndrome condition (column 7, lines 7-16). Errors equal in number (2) to the number of scrambler polynomial terms are corrected by Brueckheimer's double-bit error correction (134b).

Allowable Subject Matter

6. Claims 1-6 and 13-20 are allowed.
7. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 17 October 2006 have been fully considered but they are not persuasive.

Applicant incorrectly alleges that the decoders disclosed by Brueckheimer and Apple are not described as being used with shortened codes. In contrast, Brueckheimer (col. 4, lines 18-19) clearly discloses decoding of a shortened code. Apple discloses (col. 5, lines 44-48) decoding of an "expurgated" code, the expurgated code being understood here as a code that is consequently shorter than the original code.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (571) 272-3814. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Stephen M. Baker
Primary Examiner
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smb